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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY TITLE V PERMIT

COMPANY NAME: *YUMA COGENERATION ASSOCIATES*
PERMIT #: *1000103*
DATE ISSUED:
DATE EXPIRED:

SUMMARY

This operating permit is issued to Yuma Cogeneration Associates (YCA) for the operation of a 55 MW (nominal) combined cycle gas turbine Cogeneration facility in Yuma, AZ. The facility is located on the north west end of N. 27th Drive, Yuma, in the Mohave-Yuma Intrastate Air Quality Control Region.

YCA operates a General Electric Frame 6 turbine, fired by natural gas to generate electricity for sale. The turbine operates 24 hours a day, 7 days a week, up to 50 weeks a year. A #2 fuel oil system is available to fuel the turbine in the unlikely event of a curtailment of the natural gas supply. A Heat Recovery Steam Generator (HRSG) uses waste heat from the gas turbine exhaust, to generate high, intermediate, and low pressure steam. A majority of the steam produced in the HRSG is utilized in a turbine/generator set that generates additional electricity. The remaining steam supply provides steam injection for the gas turbine as well as process and chilling steam for the neighboring industrial facility. Emissions of nitrogen oxides from the gas turbine are reduced by injecting intermediate pressure steam obtained from the HRSG. A gas fired duct burner is operated as a supplement to the gas turbine exhaust when additional steam is required from the HRSG. One 20 million Btu/hour gas fired standby boiler is used to generate low pressure steam for the industrial customer in case of gas turbine shut down. A cooling tower is used to complete the steam generator/condenser closed cycle by rejecting waste heat from the steam condenser to the atmosphere.

All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) And 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All terms and conditions of this permit are enforceable by the Administrator of the United States Environmental Protection Agency (U.S. EPA), except those terms and conditions that are specifically identified as "State Requirements".

This Class I permit supercedes all previous operating permits issued to YCA. The terms and conditions of these permits are void as of the date of issuance of this Permit. This operating permit incorporates the applicable requirements contained in the underlying construction/installation permits and does not affect those applicable requirements.

YCA is a "major source". The potential emission rates of the following pollutants are greater than 100 tons per year: (i) nitrogen oxides, and (ii) carbon monoxide. This permit is issued in accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes. Applicable requirements for the operations at the facility are listed in

Attachment “C” of this permit.

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Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Yuma Cogeneration Associates. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through E of this permit.

Emissions Unit	Pollutants Emitted	Control Measure	Emission Limits/Standards	Monitoring/Recordkeeping	Reporting[1]	Testing Frequency/ Methods
POINT SOURCES **P1:** *GE Frame 6 turbine* **Maximum Capacity:** 36.7 MW (55 nominal for combined cycle) **Fuel:** Natural gas or fuel oil **Regulations**: 40 CFR 60 Subpart GG and Installation Permit #95012	NO_x	Massive Steam Injection (MSI) system	-25 ppm @ 15% O2 -Less than 230 tpy rolling total from turbine and duct burner as measured from CEM	CEM for NO_x, Fuel Use, Air Flow, and Steam to Fuel Ratio	-Quarterly excess emissions -Number of hours of operation	--
	SO_2	--	-sulfur content < 0.05% by weight for fuel oil and <0.8% by weight for natural gas	-Amount of fuel burned and sulfur content of fuel oil -FERC Tariff agreement	--	--
P1: *Duct Burner* **Maximum Capacity**: 45 MMBtu/hr **Fuel:** Natural gas **Regulations**: 40 CFR 60 Subpart Dc	NO_x	--	-Less than 230 tpy rolling total from turbine and duct burner as measured from CEM	-Monthly natural gas bill	--	--
P2: *Standby Boiler* **Maximum Capacity**: 20 MMBtu/hr **Fuel:** Natural gas **Regulations**: 40 CFR 60 Subpart Dc and IP #95012	NO_x	--	--	-Monthly natural gas bill	--	--

-- Not required

(1) **Semiannual Compliance Certifications required for all permitted equipment**

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 1000103
For
Yuma Cogeneration Associates

I. PERMIT EXPIRATION AND RENEWAL

[A.R.S. § 49-426.F, A.A.C. R18-2-304.C.2 and 306.A.1]

A. This permit is valid for a period of five years from the date of issuance of the permit.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a and b, A.R.S. § 49-463, and A.R.S. § 49-464]

A. The Permittee shall comply with all the conditions contained in Attachments "A" through "E"of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[A.A.C. R18-2-306.A.8.c, 321.A]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under paragraph 1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Attachment shall not result in a resetting of the five year permit term.

IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

A. Permittee shall post such permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:

1. Current permit number.

2. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.

B. A copy of the complete permit shall be kept on the site.

V. FEE PAYMENT

[A.A.C. R18-2-326, 306.A.9]

Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327]

A. Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.

B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

A. Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than April 30th, and shall report the compliance status of the source during the period between October 1st of the previous year, and March 31st of the current year. The second certification shall be submitted no later than October 31st, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year. The initial compliance certification shall reflect compliance status of the cource beginning with the date of permit issuance. [A.A.C. R18-2-309.2.a]

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification; [A.A.C. R18-2-309.2.c.i]

2. Compliance status with each applicable requirement; [A.A.C. R18-2-309.2.c.ii]

3. Whether compliance was continuous or intermittent; [A.A.C. R18-2-309.2.c.iii]

4. Method(s) used for determining the compliance status of the source, currently and over the reporting period; [A.A.C. R18-2-309.2.c.iv]

5. A progress report on all outstanding compliance schedules submitted pursuant to Section XII.D of this Attachment. Progress reports submitted with compliance certifications satisfy the reporting requirements of A.A.C. R18-2-309.5.d. [A.A.C. R18-2-309.5.d]

B. A copy of all compliance certification for Class I permits shall also be submitted to the EPA Administrator. [A.A.C. R18-2-309.2.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS [A.A.C. R18-2-309.3]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY [A.A.C. R18-2-309.4]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD [A.A.C. R18-2-304.C]

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM [40 CFR 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the timeline specified in 40 CFR Part 68.

XII. REPORTING OF EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCIES

A. EXCESS EMISSIONS REPORTING [A.A.C R18-2-310.C]

1. Excess emissions, as defined in A.A.C. R18-2-101.37, shall be reported as follows:

   a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

      (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from paragraph b. of this subsection.

      (2) Detailed written notification within 72 hours of the notification pursuant to subparagraph (1) of this paragraph.

   b. Report shall contain the following information:

      (1) Identity of each stack or other emission point where the excess emissions occurred.

      (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.

      (3) Date, time and duration or expected duration of the excess emissions.

      (4) Identity of the equipment from which the excess emissions emanated.

      (5) Nature and cause of such emissions.

      (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.

      (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up of the gas turbine, the report shall contain a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will

continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to subsection A.1.a.(2) of this Section. [A.A.C. R18-2-310.D]

3. It shall be the burden of the Permittee to demonstrate, through submission of the data and information required by Section XII.A of Attachment "A", that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of excess emissions. [A.A.C. R18-2-310.B]

B. PERMIT DEVIATIONS REPORTING [A.A.C. R18-2-306.A.5]

1. A deviation means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined through observation or through review of data obtained from any testing, monitoring, or recordkeeping established in this permit. For a situation lasting more than 24 hours which constitutes a violation, each 24 hour period is considered a separate deviation. Included in the meaning are any of the following:

   a. A situation where emissions exceeded an emission limitation or standard;
   b. A situation where process or control device parameter values indicate that an emission limitation or standard has not been met;
   c. A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.

2. Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.

3. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Attachment "B", Section III.B, and shall be certified by the responsible official. [A.A.C. R18-2-306.A.5.a]

C. EMERGENCY PROVISION [A.A.C. R18-2-306.E]

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

   a. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of paragraph (c) of this subsection are met.

   b. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the permittee can identify the cause(s) of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

(4) The permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

c. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

d. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated. [ARS §49-426.I.5]

XIII. RECORD KEEPING REQUIREMENTS [A.A.C. R18-2-306.A.4]

A. Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;

2. The date(s) analyses were performed;

3. The name of the company or entity that performed the analyses;

4. A description of the analytical techniques or methods used;

5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.

B. Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIV. REPORTING REQUIREMENTS [A.A.C. R18-2-306.A.5.a]

Permittee shall submit the following reports:

1. Compliance certifications in accordance with Section VII of Attachment "A".

2. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII of Attachment "A".

3. Other reports required by Sections I and II of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION [A.A.C. R18-2-304.G and 306.A.8.e]

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION [A.A.C. R18-2-318, 319 and 320]

Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

A. Administrative Permit Amendment (A.A.C. R18-2-318);

B. Minor Permit Revision (A.A.C. R18-2-319);

C. Significant Permit Revision (A.A.C. R18-2-320).

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT PERMIT REVISION [A.A.C. R18-2-317]

A. Permittee may make changes at the permitted source without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Act or under A.R.S. § 49-401.01(17).

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.

4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).

5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of subsections (A) and (C) of this Section.

C. For each such change under subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:

1. When the proposed change will occur.

2. A description of each such change.

3. Any change in emissions of regulated air pollutants.

4. The pollutants emitted subject to the emissions trade, if any.

5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.

6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.

7. Any permit term or condition that is no longer applicable as a result of the change.

XVIII. PERFORMANCE TESTING REQUIREMENTS [A.A.C. R18-2-312]

A. Operational Conditions During Performance Testing

Performance tests shall be conducted during operation at the full load of the unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

B. Performance tests shall be conducted and data reduced in accordance with the test method and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

C. Performance Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

D. Stack Sampling Facilities

Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

E. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined using the arithmetic mean of the other two runs. If the Director, or Director's designee, is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permitte's control. Termination of any test without good cause after the first rule is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

F. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS [A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE [A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any provision of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD [A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in Attachment "C" of this permit. The permit shield shall not apply to any changes made pursuant to Section XVI.B of this Attachment and Section XVII of this Attachment.

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 1000103
For
Yuma Cogeneration Associates

I. GE FRAME 6 TURBINE AND DUCT BURNER

A. Nitrogen Oxide

1. Emission Limits/Standards

a. Permittee shall not cause to be discharged into the atmosphere from the stack of the GE Frame 6 turbine and duct burner any gases which contain nitrogen oxides in excess of 25 parts per million, at 15% oxygen. Emissions in excess of this limit during the periods of startup, shutdown, and malfunction shall not be considered a violation.

[Installation Permit #95012, Attachment "B", Condition II.A, 40 CFR 60.8(c), 60.332(a)(1)]

b. Startup

A startup is defined as the time period following the initiation of a gas turbine start until the massive steam injection system is placed in service immediately upon reaching 300 psia at 450 ^{0}F.

2. Air Pollution Control Equipment

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the massive steam injection system in a manner consistent with good air pollution control practice for minimizing emissions from the GE Frame 6 turbine. [40 CFR 60.11(d)]

3. Monitoring, Recordkeeping, and Reporting Requirements

a. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of the following monitoring activities, performed in the same six month period as applies to the compliance certification period. [A.A.C. R18-2-306.A.5.a]

b. Continuous Monitoring System for NO_x, Fuel Use, Air Flow, and Steam to Fuel Ratio

(1) Recordkeeping Requirements

Permittee shall maintain a file of all measurements, including continuous monitoring system and monitoring device measurements; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices, recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports and records.

[40 CFR 60.7(f) and Installation Permit #95012, Attachment "B", Condition V.E]

(2) Continuous Monitoring Systems for Fuel Use and Steam to Fuel Ratio

Permittee shall maintain, calibrate, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of steam to fuel being fired in the GE Frame 6 turbine. This system shall be accurate within ±5% of the measured value.

[Installation Permit #95012, Attachment "B", Condition V.A.2 and 40 CFR 60.334(a)]

(3) Continuous Monitoring System for Air Flow

The continuous monitoring system used to measure stack gas volumetric flow rates shall meet monitoring performance specifications of 40 CFR 60 Appendix B Specification 6. [Installation Permit #95012, Attachment "B", Condition V.A.1.b]

(4) Continuous Monitoring System for Nitrogen Oxide Emissions

Permittee shall maintain, calibrate, and operate a continuous monitoring system to monitor and record the nitrogen oxide emissions from the stack. The continuous monitoring system shall meet the specifications of 40 CFR 60 Appendix B Specification 2. [A.A.C. R18-2-306.A.3.a]

c. Nitrogen Oxides

(1) Permittee shall record on a twelve month rolling average the emissions of nitrogen oxides in tons per year. [A.A.C. R18-2-306.A.6]

(2) Permittee shall calculate and report the nitrogen oxide emissions in pounds per hour utilizing the data generated by the air flow monitor.

[Installation Permit #95012, Attachment "B", Condition V.A.1.a]

d. Excess Emissions

(1) Definition

(a) Excess emissions for nitrogen oxide are defined as any consecutive 3-hour period during which the average hourly emissions of nitrogen oxides measured by the continuous monitoring system exceeds the maximum emission limit set forth in Section I.A.1 of this Attachment. This three hour rolling average shall begin with the first complete hour of steam injection operation following startup.

[A.A.C. R18-2-306.A.3 and Installation Permit #95012, Condition II.D.1]

(b) Excess emissions indicated by the CEM system shall be considered violations of the applicable emission limit for the purposes of this permit.

[A.A.C. R18-2-306.A.3 and Installation Permit #95012, Condition II.D]

(2) Reporting

Permittee shall submit a written report of all excess emissions to the Department for every 3 month period ending on March 31, June 30, September 30, and December 31. The report shall include the following:

[40 CFR 60.7(c) and Installation Permit #95012, Attachment "B", Condition V.C]

(a) The magnitude of excess emissions of Nitrogen Oxides, as defined in Attachment "B", Section I.A.3.c(1), in ppm, and the date and time of commencement and completion of each time period of excess emissions.
[Installation Permit #95012, Attachment "B", Condition V.C.1 and 40 CFR 60.7(c)(1)]

(b) Any steam to fuel ratio measured over any one-hour period reported by the steam to fuel monitor, defined in Attachment "B", Section I.A.3.b(1), which falls below the ratio determined to demonstrate compliance with 25 ppm, (15% oxygen, by volume, dry basis), and conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
[Installation Permit #95012, Attachment "B", Condition V.C.3 and 40 CFR 60.7(c)(1)]

(c) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the turbine. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported.
[Installation Permit #95012, Attachment "B", Condition V.C.4 and 40 CFR 60.7(c)(2)]

(d) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
[Installation Permit #95012, Attachment "B", Condition V.C.5 and 40 CFR 60.7(c)(3)]

(e) When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
[Installation Permit #95012, Attachment "B", Condition V.C.6 and 40 CFR 60.7(c)(4)]

e. Quality Assurance for CEM's

Permittee shall conduct or cause to be conducted certification of continuous emissions monitors on the turbine at least once in each calendar year. Permittee shall furnish the Department a written report of such tests. Certification tests shall be conducted for nitrogen oxides using methods described in 40 CFR 60 Appendix F:

(1) Quality Control Requirements;
(2) Calibration Drift Assessment;
(3) Data Accuracy Assessment;
(4) Calculations for CEMS Data Accuracy;
(5) Reporting Requirements

[40 CFR 60.13(a) and Installation Permit #95012, Attachment "B" Condition V.D]

B. Sulfur Dioxide

1. Emission Limits/Standards

Permittee shall not burn in the GE Frame 6 turbine and duct burner natural gas which contains sulfur in excess of 0.8 percent by weight or fuel oil which contains sulfur in excess of 0.05 percent by weight. [40 CFR 60.333 and Installation Permit #95012, Attachment "B", Condition VI.A]

2. Monitoring, Recordkeeping, and Reporting Requirements

a. Permittee shall monitor daily, the sulfur content and higher heating value of the fuel being combusted in the GE Frame 6 turbine. This requirement may be complied with by maintaining a vendor-provided copy of that part of the FERC-approved Tariff agreement that limits transmission to pipeline quality natural gas of sulfur content less than 0.8 percent by weight and having a heating value greater than or equal to 967 Btu/ft^3.

[40 CFR 60.334(b)]

b. Permittee shall notify the Director in writing within 30 days of any changes to the vendor-provided FERC-approved Tariff agreement relating to the fuel sulfur content and lower heating value limits that occur during the term of this permit. [A.A.C. R18-2-306.A.3]

c. Permittee shall keep on record a copy of the fuel oil purchase specification sheet. This specification sheet shall include the sulfur content (sulfur weight percentage) and the method used to determine the sulfur content of the fuel oil. [40 CFR 60.334(b)]

C. Fuel Limitation

1. Emission Limits/Standards

a. Permittee shall burn only natural gas and Number 2 fuel oil in the GE Frame 6 turbine.

[Installation Permit #95012, Attachment "B", Condition VI.A]

b. Permittee shall burn only natural gas in the duct burner. [A.A.C. R18-2-306.A.2]

2. Monitoring, Recordkeeping, and Reporting Requirements

a. Permittee shall log in ink or in an electronic format a record of any change in fuel type including:

[A.A.C. R18-2-306.A.5.a]

(1) Type of fuel change;
(2) Date of the fuel change; and
(3) Time of the fuel change.

b. Permittee shall log in ink or in an electronic format the amount of natural gas or fuel oil burned and the sulfur content of the fuel oil on a monthly basis.

[Installation Permit #95012, Attachment "B", Condition VIII]

c. Permittee shall record and maintain records of the amount of fuel burned in the duct burner each day. This may be complied with by maintaining copies of monthly natural gas purchase bills. [40 CFR 60.48.c.(g)]

II. STANDBY BOILER

A. Fuel Limitation

1. Emission Limits/Standards

Permittee shall burn only natural gas in the standby boiler.

[Installation Permit #95012, Attachment "B", Condition VI.A]

2. Monitoring, Recordkeeping, and Reporting Requirements

Permittee shall record and maintain records of the amount of fuel burned each day. This may be complied with by maintaining copies of monthly natural gas purchase bills.

[40 CFR 60.48c(g)]

III. NONPOINT SOURCES

A. Unclassified Sources

1. Materials including solvents or other volatile compounds, paints, acids and alkalies shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

2. Permittee shall not emit gaseous or odorous materials from equipment, operations or premises in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

B. Open Burning

1. Emission Limits/Standards

Except as stated in A.A.C. R18-2-602.C(1), (3), and (4) and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits, Permittee shall not conduct open burning. [A.A.C. R18-2-602]

2. Monitoring, Recordkeeping, and Reporting Requirements

Permittee shall maintain copies of all open burning permits on file.

IV. VOLUNTARILY ACCEPTED EMISSIONS LIMITATIONS

The permittee shall not emit more than 230 tons per year of nitrogen oxides, calculated as a 12-month rolling total, from the GE Frame 6 Turbine and the duct burner, as measured by the continuous emission monitors. [A.A.C. R18-2-306.01]

ATTACHMENT "C": APPLICABLE REQUIREMENTS

Air Quality Control Permit No. 1000103
For
Yuma Cogeneration Associates

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE

Compliance with the terms contained in this permit shall be deemed compliance with the following federally applicable requirements in effect on the date of permit issuance:

ARIZONA ADMINISTRATIVE CODE (A.A.C.) TITLE 18, Chapter 2

ARTICLE 6.	**EMISSIONS FROM EXISTING AND NEW NONPOINT SOURCES**
R18-2-602	Unlawful Open Burning
ARTICLE 7.	**EXISTING STATIONARY SOURCE PERFORMANCE STANDARDS**
R18-2-730.D	Standards of Performance for Unclassified Sources
R18-2-730.F	Standards of Performance for Unclassified Sources
ARTICLE 9.	**NEW SOURCE PERFORMANCE STANDARDS**
R18-2-901.5	40 CFR 60, Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units
R18-2-901.39	40 CFR 60, Subpart GG, Stationary Gas Turbines

INSTALLATION PERMIT

Permit No. 95012	Installation of Cogeneration Facility

NEW SOURCE PERFORMANCE STANDARDS - 40 CFR 60 Subpart A

40 CFR 60.7(c)	Subpart A - General Provisions
40 CFR 60.7(f)	Subpart A - General Provisions
40 CFR 60.8(c)	Subpart A - General Provisions
40 CFR 60.11(d)	Subpart A - General Provisions
40 CFR 60.13(a)	Subpart A - General Provisions

ATTACHMENT "D": EQUIPMENT LIST

Air Quality Control Permit No. 1000103
For
Yuma Cogeneration Associates

Permitted Equipment				
Equipment	**Size**	**Serial Number**	**Model**	**Date of Commercial Operation**
GE Frame 6 Gas Turbine	36.7 MW	296417	General Electric MS-6001	1994
Heat Recovery Steam Generator (HRSG)	N/A	932400	Nooter/Erikson	1994
Steam Turbine Generator	18.3 MW	155035	General Electric	1994
Duct Burner	45 MMBtu/hr	N/A	Coen Natural Gas	1998
Standby Boiler	20 MMBtu/hr	L-92034	Cleaver Brooks 700-500	1994
Fuel Oil Storage Tank	530,000 gallons	93-1565A	Schuff Steel Company	1994

Continuous Emissions Monitor

Steam Unit	**NO_x Monitor**	**Flow Monitor**	**O_2 Monitor**
GE Frame 6 turbine	Mfr. - Anarad Serial #4941 Model #AR-880	Mfr. - EMRC Model #2271	Mfr. - Anarad Serial #4942 Model AR-23

ATTACHMENT "E": INSIGNIFICANT ACTIVITIES

Air Quality Control Permit No. 1000103
For
Yuma Cogeneration Associates

S. No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
1	Piping of natural gas
2	Water treatment and cooling systems for process water
3	Storage of sodium hydroxide (50%)
4	Storage of sulfuric acid (93%)
5	Storage of sodium hypochlorite
6	Storage of Nalco 8103 coagulant (Polyquaternary Amine)
7	Storage of Nalco 356 Corrosion Inhibitor (Cychlohexylamine & Morpholine)
8	Storage of Nalco 7208 feed water treatment (NaOH & TSP)
9	Eliminox oxygen scavenger (modified amino compounds)
10	Nalco 7330 microbiocide-5-chloro-2-methyl-4-isothiazolin-3-one-2-methyl-4-isothiazolin-3-one
11	General office activities and maintenance
12	Restroom facilities and associated cleanup operations
13	Air conditioning in office
14	Maintenance and repair of emission units and equipment
15	Circuit breakers
16	IC engine driven fire water pumps for emergency service
17	Garratt-Callahan Formula 2022 (zinc phosphate)
18	Garratt-Callahan Formula 647 (sodium hexametaphosphate)
19	Nalco N-1801 (corrosion inhibitor)
20	Nalco Stabrex ST70 (stabilized bromine bleach)
21	Nalco 39-M (corrosion inhibitor)